

### **3<sup>rd</sup> Grade Resources**

#### **Exploring Equal Sets**

From the National Council of Teachers of Mathematics, Illuminations

This four-part lesson encourages students to explore models for multiplication, the inverse of multiplication, and representing multiplication facts in equation form.

<http://illuminations.nctm.org/LessonDetail.aspx?ID=L317>

#### **All About Multiplication**

From the National Council of Teachers of Mathematics, Illuminations

In this four-lesson unit, students explore several meanings and representation of multiplications and learn about properties of operations for multiplication.

<http://illuminations.nctm.org/LessonDetail.aspx?id=U109>

#### **It's in the Cards**

From the National Council of Teachers of Mathematics, Illuminations– Multiplication

Students skip-count and examine multiplication patterns. They also explore the commutative property of multiplication.

<http://illuminations.nctm.org/LessonDetail.aspx?ID=L324>

#### **It's in the Cards: Looking for Calculator Patterns**

From the National Council of Teachers of Mathematics, Illuminations-Multiplication:

Students use a web-based calculator to create and compare counting patterns using the constant function feature of the calculator. Making connections between multiple representations of counting patterns reinforces students understanding of this important idea and helps them recall these patterns as multiplication facts. From a chart, students notice that multiplication is commutative.

<http://illuminations.nctm.org/LessonDetail.aspx?ID=L325>

#### **Make a Hundred**

From the Mathematics TEKS Toolkit

Students roll a die seven times, each time determining whether to add that number of tens or that number of ones to make a sum as close to 100 as possible without going over.

[http://www.utdanacenter.org/mathtoolkit/instruction/lessons/3\\_hundred.php](http://www.utdanacenter.org/mathtoolkit/instruction/lessons/3_hundred.php)

#### **Multiplication as Area**

Students visualize the multiplication of two numbers as area.

[http://nlvm.usu.edu/en/nav/frames\\_asid\\_192\\_g\\_1\\_t\\_1.html?from=category\\_g\\_1\\_t\\_1.html](http://nlvm.usu.edu/en/nav/frames_asid_192_g_1_t_1.html?from=category_g_1_t_1.html)

#### **Investigating Equivalent Fractions with Relationship Rods**

From the National Council of Teachers of Mathematics, Illuminations: Fun with Fractions:

Students investigate the length model by working with relationship rods to find equivalent fractions. Students develop skills in reasoning and problem solving as they explain how two fractions are equivalent (the same length).

<http://illuminations.nctm.org/LessonDetail.aspx?ID=L543>

## Fun with Fractions

From the National Council of Teachers of Mathematics, Illuminations

In this unit, students explore relationships among fractions through work with the length model.

This early work with fraction relationships helps students make sense of basic fraction concepts and facilitates work with comparing and ordering fractions and working with equivalency.

<http://illuminations.nctm.org/LessonDetail.aspx?id=U152>

## Fractions-naming

[http://nlvm.usu.edu/en/nav/frames\\_asid\\_104\\_g\\_2\\_t\\_1.html?from=category\\_g\\_2\\_t\\_1.html](http://nlvm.usu.edu/en/nav/frames_asid_104_g_2_t_1.html?from=category_g_2_t_1.html)

## Fractions-visualizing

[http://nlvm.usu.edu/en/nav/frames\\_asid\\_103\\_g\\_2\\_t\\_1.html?from=category\\_g\\_2\\_t\\_1.html](http://nlvm.usu.edu/en/nav/frames_asid_103_g_2_t_1.html?from=category_g_2_t_1.html)

## Fractions-Parts of a Whole

[http://nlvm.usu.edu/en/nav/frames\\_asid\\_102\\_g\\_2\\_t\\_1.html?from=category\\_g\\_2\\_t\\_1.html](http://nlvm.usu.edu/en/nav/frames_asid_102_g_2_t_1.html?from=category_g_2_t_1.html)

## Learn Fractions with Cuisenaire Rods

<http://teachertech.rice.edu/Participants/silha/Lessons/cuisen2.html>

<http://teachertech.rice.edu/Participants/silha/Lessons/equivalent.html>

## Interactive Clocks

[http://nlvm.usu.edu/en/nav/frames\\_asid\\_316\\_g\\_2\\_t\\_4.html?from=category\\_g\\_2\\_t\\_4.html](http://nlvm.usu.edu/en/nav/frames_asid_316_g_2_t_4.html?from=category_g_2_t_4.html)

## Match Clocks

[http://nlvm.usu.edu/en/nav/frames\\_asid\\_317\\_g\\_2\\_t\\_4.html](http://nlvm.usu.edu/en/nav/frames_asid_317_g_2_t_4.html)

## What Time Will it Be? [Elapsed Time]

[http://nlvm.usu.edu/en/nav/frames\\_asid\\_318\\_g\\_2\\_t\\_4.html](http://nlvm.usu.edu/en/nav/frames_asid_318_g_2_t_4.html)

## It Takes Ten

Students estimate and measure marbles to the nearest gram and squeeze water-saturated sponges to practice measuring in milliliters.

[http://www.pbs.org/teachers/mathline/lessonplans/esmp/ittakesten/ittakesten\\_procedure.shtm](http://www.pbs.org/teachers/mathline/lessonplans/esmp/ittakesten/ittakesten_procedure.shtm)

## Bar Grapher

From the National Council of Teachers of Mathematics, Illuminations:

This is a NCTM site that contains a bar graph tool to create bar graphs.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=204>

## Exploring Equal Sets

From the National Council of Teachers of Mathematics, Illuminations

All About Multiplication

Students listen to the counting story, What Comes in 2's, 3's, & 4's, and then use counters to set up multiple sets of equal size. They fill in a table listing the number of sets, the number of objects in each set, and the total number in all. They study the table to find examples of the order (commutative) property. Finally, they apply the equal sets model of multiplication by creating pictographs in which each icon represents several data points.

<http://illuminations.nctm.org/LessonDetail.aspx?ID=L317>

## What's in a Name?

From the National Council of Teachers of Mathematics, Illuminations:

Students create pictographs and answer questions about the data set.

<http://illuminations.nctm.org/LessonDetail.aspx?ID=L536>